WHAT IS CLAIMED IS:

1. A TSSI monitoring device for monitoring a correct time slot sequence in a time/space switching network for a time or space allocation of data channels to be switched, comprising:

a TSSI insertion mechanism for inserting a TSSI monitoring value into a predetermined data channel of successive frames to be switched, wherein said TSSI monitoring value for each frame is incremented or decremented by a predetermined value; and

a difference forming mechanism for forming a difference of data contents of said predetermined data channel for immediately successive frames to be switched by said time/space switching network, wherein said difference is equal to said predetermined value for a correct time slot sequence.

2. The TSSI monitoring device according to claim 1, further comprising an error counter for counting TSSI errors for a lack of agreement between said formed difference and said predetermined value.

3. The TSSI monitoring device according to claim 1, wherein said predetermined value is equal to 1 and is derived from a counter.

4. The TSSI monitoring device according to claim 1, wherein said difference forming mechanism comprises:

a delay for delaying a predetermined data channel to be switched by one frame;

a subtractor for determining a subtraction result from a data content of a delayed data channel and a data content of an undelayed data channel; and

a comparator unit for comparing said subtraction result with said predetermined value.

5. The TSSI monitoring device according to claim 4, wherein said delay comprises at least one speech memory of said time/space switching network.

6. The TSSI monitoring device according to claim 1, wherein said TSSI insertion mechanism comprises a plurality of TSSI insertion units that are respectively allocated to an input switching network line.

7. The TSSI monitoring device according to claim 1, wherein said difference forming mechanism comprises a plurality of difference forming units that are respectively allocated to two output switching network lines.

8. The TSSI monitoring device according to claim 2, wherein said error counter comprises a plurality of error counting units that are respectively allocated to a difference forming unit.

9. The TSSI monitoring device according to claim 1, wherein said TSSI insertion mechanism is fashioned in an equalizer for producing a plurality of synchronous frames from non-synchronous frames.

10. The TSSI monitoring device according to claim 1, wherein said predetermined data channel to be switched represents a test channel.

~~11.~~ A method for monitoring a correct time slot sequence in a time/space switching network for a time or space allocation of data channels to be switched, comprising the steps of:

inserting a TSSI monitoring value into a predetermined data channel of successive frames to be switched, wherein said TSSI monitoring value for each frame is incremented or decremented by a predetermined value;

time or space allocating said data channels to be switched in said time/space switching network;

forming a difference of data contents of said data channel to be switched by said time/space switching network for immediately successive frames; and

outputting an error value when said difference is not equal to said predetermined value.

12. The method according to claim 11, further comprising the step of: incrementing an error counter dependent on said output error value.

13. The method according to claim 11, wherein said TSSI monitoring value is incremented by a predetermined value derived from a counter.

14. The method according to claim 11, wherein said step of forming a difference of data contents of said data channel comprises the steps of:

delaying said predetermined data channel to be switched by one frame;

determining a subtraction result from a data content of said delayed data channel and a data content of an undelayed data channel; and

comparing said identified subtraction result to said predetermined value.

15. The method according to patent claim 14, wherein said step of delaying said predetermined data channel is implemented in a speech memory of said time/space switching network.

16. The method according to claim 11, wherein said step of inserting a TSSI monitoring value is implemented for a plurality of input switching network lines.

17. The method according to claim 11, wherein said step of forming a difference of data contents of said data channel is implemented for a plurality of respectively two output switching network lines.

18. The method according to claim 11, wherein said step of inserting a TSSI monitoring value takes place in a test channel.

19. The method according to claim 13 wherein said predetermined value is one.